30 for 2030 Idea Table 1

Walmart, AZ Sate Coalition, NCPA, U. Texas School of Pharmacy, Merck, Consumer > 50

Table 1 discussed three objectives. The objectives were broken down into three campaigns. The first item discussed was a technical component. The second item was messaging and an information campaign focused on families. The third was to examine the possibilities of public and private partnerships.

First goal focused on providing the most benefit to consumers by developing opportunities for consumer to access and maintain vaccine and health records.

Technical Ideas Generated (Initially Tdap focus)
● Expand Consumer Access to include health records for all consumers, to include mothers and babies, through consolidating health and immunization records.

● Expand GPS (location) tracking software to notify consumers when they arrive at pharmacy.
  ○ Create pilot program at Pharmacy retailer.
  ○ Notify consumer of no wait times and ease of use.

● Create opportunity to notify family members and friends that meet baby to get vaccinated. Use an app to create incentives to vaccinate.
● Integrate IIS behind the scenes to make accessibility seamless such as QR Codes, integrate health and vaccination records with PCP records.
● Consumer app ability to integrate in EMR.   ○ Test app in pharmacy.
● Provide every opportunity for patients to know their own health histories.

Messaging Ideas
● Create social #IVAX or #Flushots campaign much like ALS Challenge attached with science and historical based facts to educate and inform public on benefits of immunizations.
● Focus campaigns around key times of calendar.
● Partner with existing coalitions to impact education.
● Look for public facing opportunities to expand immunization education such as the example of flu shots at the Golden Globes.
● Develop theme of vaccinations given to armed forces to protect them and link to patriotic messaging of protecting your family and your community.
● Expand vaccinations concept as another way to serve and protect your community. Protect the most vulnerable in population.
● I Vax stickers, like I Voted stickers to show that you are immunized when around baby and to promote vaccinations to public when shots are given. Distributed by pharmacists and other providers.
● Match antivax community with fact-based information.
● Present social testimonials of real parents of children affected by non-vaccinations.
● Get fathers, grandparents, and friends up to date with vaccinations. Educate on importance vaccinations to protect baby.
● Approach social groups and parent focused companies such as care.com and parent meet up groups on importance of vaccination.
● Show importance of vaccinations much like background checks caregivers and knowledge of CPR benefits.

Messaging Ideas
● Partner with coalition and advocacy groups to impact messaging.
● Tie in vaccination education and where to get vaccinated information with birth announcements, baby showers, etc.

Public/Private Partnerships
● Promote vaccinations and vaccination education to key groups such as business organizations and conventions that serve the baby industry such as ABC Kids Expo.
● Work with insurers to provide incentives and penalties for vaccinations much like higher rates for smokers and lifestyles choices.

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30 for 2030 Idea Table 2

PQA 1, Bartell Drugs, Sanofi, Indiana State Coalition

Ideas Generated (Initially Measles Focus)
● Flu campaign – measures, How employer HR effectively implement it? Can you get payers involved, not HR? Physicians HEDIS measured and it's a break to consumer. Example BCBS app, due for pertussis, flu, check. Reduced premiums. Reduced premium for spouse?
● Consumers should be able to monetize data set. Example McKesson, fit bit. If you hit steps get reduced premium. What if there was a formula, over 50, had mammogram = monetize. Should be set by ACIP guidelines. Identify at risk populations. Pilot with innovative employer that's already doing something. Could this be added on? Name, date, kids, height, weight = health coach. Pair like-minded health goals, scale. Fit bit, start teams.
● Struggle – those who want to do it, will do it. How do you get others engaged? Vaccine manufacture: ACIP guidelines not mixed in.

● Those states who utilize Consumer Access
    ○ Changing behavior:
        - Drive, registry available, flu
        - Report card
        - Education
        - Coupons
        - Convenience

● Non-profit offers continuing Education (MOC) – 6-month course. Free CME. Example: "Someone you Love", certified nursing credit – provide program. Billboards, social media platforms, outreach to big states. Advocacy. Engage advocacy. Pharmacies work with coalitions but not necessarily all states have great relationships. These are relatively new partnerships. VFC pilots in IN. Problems with border states because people don't want to be in the system. No safe place to go to receive care so they go to pharmacies.
● Reach out to Coalitions & Coalitions leaders, several have state partners (Ex. American Cancer Society) – every odd year have conference, Nat'l conference in partners. Engage and target these people to increase immunization population.

Ideas Generated (Initially Measles Focus)

- Improved Pharmacist education for pharmacist to support immunizations for kids under the age of 2. APhA to include other injection sites education course. Right now pharmacists can administer an immunization but don't at younger ages because it's a liability, they need additional training.
- Support/education with combo vaccines. Myths of Autism. Combat issues head on. Cases of MMR people who have it. Tell stories, use data. Peer to peer.
  - Anti-vaccine – good at telling their stories. No stories to tell for those who don't get anything.
  - "Vaccines didn't get Autism" vaccine research world.
- Education during pregnancy – mother's make the decision during pregnancy. Reach out to midwives in addition to alternative sites for midwives at birthing centers in hospitals. In Hospitals: New mom receives care packages. Why not education on immunizations?
- Timing of education is important (pregnancy). Focus on moms? Caregiver. Younger population because you don't see disease.
  - Social media/players
- Belief is powerful. Something to blame is so much. Don't vaccinate anti-vaxxers. Logical conversation is difficult.
  - Vaccine hesitant – those are people we can change.
- Parent advocate groups – voice is so much quieter compared to those who antivax. Power in scare tactic, because you can't see it now. Use Marketing to target and change behavior.
- In pharmacy what's seen sometimes is the older adolescents coming in wanting to get vaccinated but pharmacists can't vaccinate without parental consent. Title 10 clinic can get HPV. Because its STI Prevention. Kids actively seeking help – why can't we help them? We need to fill this gap.
  - In pharmacy messaging about vaccines can be adding to patient write up. LDM: free service, NDC list, driven by pharmacy. Example lactation specialists: huge community outreach, target them and educate to increase immunizations.

- Patricians: don't talk about immunizations, too busy, just talk about simple preparations. Need dedicated funding materials.
- ACOB (American College of OB) Can we get training in there? Becoming vaccinators, good training target for different populations as well as overall population. Just starting to immunize, more excited than Family Practitioners.
- Want: VFC not be so hard for kids in pharmacies/retailers to get into (18 older) but requirements are so specific. Pharmacies would need Liability & Specialized training.
- Pharmacies (providers). Mid-size might work in some states. Each state has different laws. Pharmacy board, annual site visits. Can we use them to do VFC compliance reports since they're already in pharmacies? It would take the burden off PH.
- Financial incentive through payers What stream is the most easy?
- Immunization liaison at hospital, peds office (MA job – too busy), Disease awareness, messaging not data driven (data based, not data driven), Education for moms at OBGYN
- Positive social media platforms – how do you get parents engaged? Power in parents and for kids – avenues.
- Gaming ads
- Zip Fencing – specific area, low immunization rates. Coalition could put ads in zip codes. IN: Seeking education. Disease states.
- Truth Campaign – would the ad council, public service announcement. Take on a challenge for a year, funded through coalitions. $ from manufacturing. How do campaign choose topics?
- Pregnancy vaccinations – educate during pregnancy, notifications. Reminders to share stories.
- Parent advocate groups (ex. Hoosiers) to extend to community. Immune compromised community, sharing stories, talking to PTA church groups, Girl Scouts, etc.
- Create coalition between pharmacy organizations (ACOG, NCPA) develop materials for pregnant

Ideas Generated (Initially Measles Focus)
moms. Sending out materials, inserts. Signed letter, simple things, personal touches make an impact.
• Lower the age of consent for immunizations. Target kids never got immunizations when they were younger.
• Consumer application, friendlier immunization records, visually appealing, report card. Push notifications that advised you. Did you know your son should expect this… will be due for... engaged, easy to navigate. Look at, what's due… prepared. Reinforced behavior, provide credible resources. Google directing to credible source with information.
• Positive vaccine, media… scare tactics. "Did you know" vaccine. PSA pertussis.
• Education on outbreak. Why is it so important? This is what can happen...
• We've become complacent.
• Pictures, real life example, encouragement of combo vaccines to combat negative messages that are out there.
• Ad council to pay/run a campaign – vaccine campaign
• Attention to all sectors in healthcare not just PH
• How do you get messaging out to general public?

30 for 2030 Idea Table 3

AVAC, PQA 2, Media, OmniSYS, U. Texas School Public Health, (Discount Drug Mart), Consumer < 50

Ideas Generated (Initial Series Focus)
• Show me your Vax-Face! People take pictures so that we laugh. We want LeBron James. As if they were voting. Go Vote!
• Hire Influencers (social media)
• Mobile vaccine clinic. There's a company VAXER that has piloted this idea.
• Vax information on Starbucks cups
• Lift and Uber marketing campaign. They did a test in Boston about this. There was a nurse in the back of the car.
• Shots with the pets. Make people do shots their own shot when they take their pet to do theirs!
• Vaccination version of "Death Clock/Watch". How many people will die in this community? CDC has already a map, put it together with actual data.
• Consumers have to have more accessible. Geo-cached. The consumer does not need to wait for the doctor to do it in the backend. Like "checking in" in a place.
• Would you like to donate $20 for someone to get a shot today? Like a two for one. Like Toms shoes.
• Cultural shift. Getting science to be trusted. Trusting people in PhD.
• WhyIVax 2.0. Super Bowl commercial?
• Over the counter vaccines, make them more accessible in some way.
• The "Stick". Otherwise you can't go to public school. You can't go to Hawaii unless your

vaccinated
• Good bots. Recruit for our causes.
• Root cause for antivaxers. Is it loneliness? We should attempt to explain what we don't know or is inexplicable.
• Explicit health campaigns. You can prevent cancer with vaccinations: "preventable cancer". Show the ugliness that tobacco used. Meth campaigns. Merck did something like this and received negative feedback
• Integrate the IIS with Apple Health or other apps.
• Get famous you tubers. Hire Bill Nye the Science Guy
• Incentives to vaccinate. Like Aflac gives you money back for something preventable. Geico if you are a good driver.
• Making immunizations a leading indicator for public health, so that is becomes in the national conversation
• Make an adult composite of the study of all immunizations, so that everyone can come together and have the same conversation amongst all parties. No translations needed.
• IIS is currently only able to focus on certain populations. Stop the silos.
• How can we make a stronger IIS ecosystem that is tied with Medicaid?
• Bringing in a health metric system that starts to use the metrics of Healthy People amongst others.
• No cost sharing. It's not equal who pays how much for vaccines. For example private plan is free. Medicare they make it really hard because they don't get all vaccines shots for free.
• Data sharing between states. We don't have an national IIS but how can we share data better? The data does not transfer.
• Social media campaign: outbreak. Getting the word out to partners that would like to participate
• Having a federal provider status for pharma that is consistent with vaccine types, which align with ACIP guidelines.
• Good bots. In education and other industries, a discrete chunk of info gets delivered. With geo-locators, which already exist in pharma, we can give small pieces of info: "did you know that in this neighborhood... ". It should pop in your phone like coupons currently do.
• Improving data sharing through the block chain approach. Single view of a patient that is available everywhere. Block chain immunization records
• Target the attitude of the antivax demographic based on a study done in TX. Sophisticated, white, urban, that sends kids to school, and privileged. How can we reach the heart of antivaxers?
• Make the Smithsonian campaign for any outbreak be applied in other places. Interactive things that will draw people in.
• Share the impact of infectious diseases.

30 for 2030 Table 4

AIRA, Indian Health Physician, U of Arizona School of Pharmacy, Indiana PH, PDX

Ideas Generated (HPV Initial Focus)
• Create a national framework for IIS - a policy platform that would allow for interoperability, cross-jurisdictional data exchange. Would borrow from established registry programs - Cancer, etc.

Ideas Generated (HPV Initial Focus)

- Public & private partnerships for matching patients, de-duplicating
- Funding - establish a funding mechanism that provides some infrastructure to operate, maintain, enhance IIS
- Composite measures - developing a methodology for measuring achievement towards measures
- Creating videos that spotlight the role of data in public health (highlight patient personas that detail how HPV impacts each group)
- Health Info exchange – put all data into an HIE.
- Using memes Instagram to advertise/ get celebrity endorsements
- Lobby for legislation that allows minors to get immunized without their parents' consent
- Have major mass immunization clinics with high profile person leading the charge
- Schedule annual or bi-annual pharmacy screening for students.
- Create universal interfaces between school systems and IIS (K- college)
- Track immunization requirements by location (track employee annual flu shots or Tdap) track by employers or job classifications
- IIS – SIS Interface
    - Create a universal interface that can be used between immunization information systems and school information systems for grades K-12.
    - Create a universal interface that can be used between immunization information systems and college information systems for college/university enrollment
- Vocation requirements
    - Create functionality that will allow employers to track immunization status by employee
    - Create functionality that will allow employers to track immunization status by job classification
- Universal registry
    - Create a national registry that all states can use or interface with.
- Client portal
    - Develop a client portal that searches multiple state registries to create a complete immunization history for a patient. This would be more of a business intelligence tool that would mine the data of individual registries.
- Health insurance incentives
    - Create incentives for employers and employees for being fully vaccinated per ACIP recommendations
- The challenges we have in VFC vs non VFC – establish a universal vaccine program
    - Demo project, in a school we will provide all the immunizations with one payer system (Consumer Access)
- Establish a way to query every state before an immunization is given. Establish a standard that allows for standardization. Example with opioids, Dr. is required to search the PDMP before an opioid is prescribed.
- School based clinic for all the annual flu or school aged vaccines.
- How to crowd source data quality for patients to get an immunization receipt.
- Non-resident Pharmacy for lookup in a state that they don't practice in. Large National chains are skating around this today because they have stores in every state so they spoof the lookup as if it were coming from a store within that state. This creates a disadvantage for regional chains that are near Border States since they cannot look up patients who live in one state and work in another. Potential patient safety issue?

Ideas Generated (HPV Initial Focus)

• Social Media notifications and enrollment - Target patients on social media based on their socioeconomic data that Facebook targets as well as age, etc. Upon clicking on the link the patient would be able to schedule an appointment with a pharmacy in their area that provides the appropriate immunizations.
    o Target patient is identified in social media, Facebook, Twitter, and Instagram.
    o Patient clicks link and enters in additional information
    o Through electronic interface patient appropriate immunizations determined.
    o Patient chooses pharmacy of choice based on real time view into the inventory on-hand for each immunization they qualify for.
    o Real time benefit is executed so payment amount is known
    o Appointment scheduled with Pharmacy

• Uber Vax / Lyft Vaccines. Two years ago Uber partnered with Columbia Hospitals to target patients who history of skipping appointments and drastically cut down missed appointments and also helped lower their re-admittance ratings. In a similar fashion I know myself and for my parents (70yrs of age) if a person showed up to their house or work to give them their immunizations they would be much more likely to do it.

HPV Projects Ideas
• Partner with the colleges to advertise get the mascot to a school for an immunization campaign.
• Partner with Merck to see if they would provide all vaccines for a school to demonstrate the increase of vaccine rates

30 for 2030 Idea Table 5

Humana, AIM, U. Az. School of Pharmacy 2, Louisiana PH, Pioneer RX

Ideas Generated (Initial Focus Increase Flu Vaccines)
• 2 year old evaluation to include vaccination checkup, providing a score similar to an APGAR
• Align measures: National Immunization Survey, Medicaid and Private Pay Providers – timely consistent messaging.
• Tools to reassure techs administering vaccinations they are doing it correctly. Simplify the confusing schedules and provide support documentation.
• There are receptive periods in our lives target those periods to deliver the appropriate messages – examples: adolescence when they are starting to make their own choices. Pregnant women.

• Use technology to administer vaccines: mobile alerts to phone/watch, scheduling, drone delivery and robot administration with auto documentation into registry.
    a. Ideas around increasing Flu vaccination rates
        i. Antivax campaign (war against tobacco).
        ii. Single sign-on portal to access all records and receive reminders for vaccinations.
        iii. 2 y/o APGAR score to include immunizations.

Ideas Generated (Initial Focus Increase Flu Vaccines)

- Probabilistic matching for registry matching. (ex. Which street have you lived on?)
- Counter offensive campaign against antivax movement using marketing strategy and social media targets. Also tap into emotions not just list the facts.
- Unify portals from STC with API to other portals. (i.e. A single source of truth for patients)
- Use notification engine to prompt patients about vaccines due and a link of where to go to get them (similar to emergency response system.) Twilio style product.
- Lobby government to make all registry option opt out and super easy to sign up for. (ex: No TX opt-in option)
    - b. Ideas around increasing Flu vaccination rates
        - i. Using market research to persuade employers to offer PTO when flu shot vaccination is received.
        - **ii.** Counter offensive campaign against antivax movement using marketing strategy and social media targets. Also tap into feelings not just facts. Socially unacceptable to not be vaccinated for a good reason.
        - iii. State sponsored vaccine text message campaign before flu season, use Twilio/IVR to drive response where to get vaccine.
- One data system linked to all healthcare recommendations and accessible via consumer on smartphone (one nationwide system) reward points to individuals to be up to date.
- Partnership with sports organizations (NCAA) and high school federations to create a checklist to participate to include being fully vaccinated.
- One national campaign to wipe out antivax sentiment. Similar to war against tobacco. Make not getting vaccinated like smoking indoors; unacceptable. Leverage all resources to educate public – manufacturers, govt., etc.
- Public/consumer registration sign up system to prepare for pandemic a game like exercise national table top.
- Health system /Medicaid /govt. incentives coordinated with healthcare benefits and tax incentives.
    - c. Ideas around increasing Flu vaccination rates
- One national campaign link to exercise and a pandemic.
  Silent majority campaign – pro vaccine and using social media to speak louder about value of getting vaccine.
- Require all states to be electronic and EMRs and e-pharmacy mgmt. systems be bi-directional to IIS and have consistent forecasting. There is a need for more complete records.
- Phone alerts when it's time for immunizations the same way retailers send Happy Birthday messages and could include "it's now time for your X vaccine".
- All pharmacies receive payment for all vaccines administered.
- Data analytic feedback to providers, consumers, etc.
    - d. Ideas around increasing Flu vaccination rates
        - i. Social media campaign.
        - ii. Require all states to be electronic and EMRs and e-pharmacy mgmt. systems be bi-directional to IIS and have consistent forecasting. There is a need for more complete records.
        - iii. Similar game to Pokémon but avoiding the flu virus in a pandemic exercise.
- Educational campaign with children impacted by preventable diseases and parent stories. (how minds were changed)
- Increase integration of immunization at Medication Therapy Mgmt., annual wellness visits, etc.
- National complete self-service and or health care accessed record of all lifetime shots in automated manner.
- Uber with vaccine delivery and care-service or scheduled service where you are.

Ideas Generated (Initial Focus Increase Flu Vaccines)

- Auto generated recommendations of shots needed based on history, diagnosed conditions, age, etc. Along with prediction on likelihood to receive and best channel.
    - e. Ideas around increasing Flu vaccination rates
        - i. Uber with vaccine delivery to order flu shots with submission to insurance, registry, etc.
        - ii. Prediction of member with likelihood to complete flu vaccine, channel to complete.
        - iii. Education call out and stigma or real life scenario of non-completion. (i.e.: causing other family members, grandkids, grandparents, etc. to get sick.)

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30 for 2030 Idea Table 6

Health Strategist, APHA, IAC, Wyoming PH, HHS

Ideas Generated (Initial Focus Pregnant Women)

- Currently identify pregnant women cannot be captured in the IIS. If it could be there could be an issue with a start and stop date – which is important because Tdap is needed for each pregnancy
    - o How can we capture the data?
        - ▪ Add it to the HL7 data message
        - ▪ Get it from patient directly (in pharmacy)
        - ▪ Get the information from the payers - It was mentioned that there was a big difference between Medicaid claim rates and IIS rates in general.

- PRAMs data from the CDC came up (Pregnancy Risk Assessment Measurement)
    - o Tdap is not a standard question in PRAMs (state advocates needed) – similar to Opioid usage added this year
    - o Ideally need to capture pregnancy pertussis status
    - o Put together a financial impact/cost of pertussis, it would get the CDC to potentially include it in PRAMs
    - o One good element of PRAMs is that it captures if the patient asked for it, or if the doctor recommended, so we would know where the issues are for education purposes

- Utilize a tool like Myhealthfinder.com for adult recommendations

- Another key piece was getting the adult providers set up in the IIS – key opportunity area or "gap" – issues with states not onboarding them even if they want to be connected… explore why this is an obstacle in states.

- Need to sort out a privacy model that puts the patient in charge of their information and that drives accountability (Block Chain Data).

- Encrypted data is at risk in 2-3 years, so the information needs to "go away" so it isn't hacked in the future

- Companies behind the scenes are already integrating our data; the example used is that went to CVS pharmacy with their new insurance cards this year, and the pharmacy already had the

Ideas Generated (Initial Focus Pregnant Women)
information for him and his wife (how did that happen?)
• Companies are profiting from sharing this data on you behind the scenes, so how do we put the customer in charge of this and let them charge to have others view their "digital dust"
• National IIS
• Consumer Access – Integrated record – all vaccines, medications captured, each patient has an accurate consolidation of their data
• Privacy model that works – patient in charge, balance on accountability and less vendor controlled
• Campaigns/Convening – focus on listening, understanding and compromise
• POC service delivery model that integrates with MyIR, national IIS, etc.
• Integration of existing data sets – national healthcare IIS
• Empower consumers – better access to their data
• Payer incentives – improvement of data – capturing of pregnancy status
• Motivating providers more than ROI   a. Mentioned program they did in 2009 around H1N1 – had signs in the pharmacy that said "Because we care about you, we participate in the IIS"
• Increase Capacity which is required for states to do any new activities   a. Bring in suppliers/Payers to help build coalitions or enhance existing ones to help with capacity/funding at state level
• Privacy model for state agencies then expand to private organizations
• Social Media campaigns – another day without measles, flu, etc. Target from a channel perspective building stakeholders (Pharmacy, payers, etc.)
• List of data sources – know how to use them, training, etc.
• Have solid data sources around pregnant women
Two approaches – marketing and measurement
• Consumer set of services to authenticate access and then work with existing apps, etc. Set the STANDARDS way to integrate – don't create the app, let them use the one they want, but again set the authentication and standards and be the back engine to enable the other apps
• Message – modernize marketing campaigns so we're staying relevant with the targets
• Measurements – connect with payers bi-directionally
• Connect Adult providers to IIS
• Figure out how pregnancy status can inform immunizations (CDC, PRAMs, etc.)
• Standard data sets
• Block chain/encrypting solutions
• Patients in the middle
• Private/Public solution mandate at state level – aligning ideas with stakeholders public/private partnerships
• Weave information in for a marketing perspective